Administrative - Internal Use Only

1 7 OCT 1973

MEMORANDUM FOR: Deputy Director for Intelligence

THROUGH : Director, Central Reference Service
Acting Chief, Information Services Group
Chief, Document Services Group

SUBJECT : Problem Summary--OJCS/CRS Merger
Operations

1. OJCS/CRS conversion activities have been
under way since April of this year. The transfer of
CRS batch applications and message dissemination (MAD)
processing was completed during August; delays in
equipment delivery to upgrade the OJCS Computer Center
have caused slippages in transferring the CRS on-line
applications. As things currently stand, however, we
are still targeted for discontinuing the CRS IBM
System 370 on 31 October 1973.

2. We recognize that a conversion effort of this
size is bound to experience problems and this one was
no exception. Without the continuing dialogue and
spirit of cooperation and good will between personnel
of OJCS and the CRS merger team, the transfer of
computer workloads could never have progressed as
far as it has. We are concerned, however, that the
nature of some of the problems still being experienced
may be with us for a long time, or simply not go away.
The following paragraphs briefly summarize the types
of problems, in order of frequency, recorded in our
"CRS Daily Report on Processing and Conversion Problems"
since 1 September 1973.

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3. Operator Error, Equipment and OS Problems:
These difficulties (some of which are attributable to
CRS) have accounted for more than half of our run
failures.

    a. Typical OJCS operator problems have
included: mounting master files (tapes) as
scratch (work) tapes, thereby destroying a
master file; mounting a wrong input tape
which generally aborts the job; mislabeling
output tapes, e.g., supplying wrong tape
number to the user (generally transposed),
etc. (Our magnetic tape file holdings are
in excess of 4000. CRS/SSD programmers
have spent literally days in recovering
lost or damaged tape files.)

    b. Equipment problems have included:
momentary OJCS hardware failures (equipment
checks); problems with CRS's Remote Job
Entry (RJE) hardware (HETRA Printer/Card
Reader), and CRT failures (blown fuses,
paper jams, lines becoming disconnected
for unexplained reasons, etc.).

    c. Operation System (OS) problems
have included: ASP and OS communications
problem wherein the system is calling for
one tape to be mounted on two tape servos
at the same time; unexplained input-output
errors; changes made to system software
without advance notice to CRS; instances
of the inability of system software to
validate internal tape labels, etc.

    d. Job Control Language (JCL) errors,
and mistakes in setting up production run
job streams, have been the fault of CRS's
Data Management Branch personnel. Operating

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in the OJCS RJE environment has required
that we learn a great deal more about the
technical workings of the OJCS Computer
Center than was formerly required in our
own center. This has been a learning
process--mostly heuristic--and we are
improving with time.

4. Procedural Difficulties Including Resource
Contention: When a Remote Job Entry (RJE) job fails,
there is usually no attempt by the OJCS operators to
issue a restart, and the aborted job must be resubmitted
by CRS. Many of our production runs require a large
amount of resources and OJCS scheduling algorithms defer
these runs to the evening and nighttime hours. When
any of the larger jobs fail, it generally means a
minimum delay of one full day. CRS customers are not
accustomed to this kind of service.

5. Added Administrative Overhead: Operating a
production shop in an RJE environment has required a
significant increase in the area of administrative and
control activities. Virtually every production run must
be screened in order to identify the tapes used for that
run, and the new tape numbers must be transcribed into
logs set up for each job. RJE also requires that
cataloged tapes be used, which causes additional overhead
for each run, i.e., there is a constant cataloging and
uncataloging of tapes.

6. We hope that things will get better and are
working to achieve the hope, but:

a. Operator problems may well continue
because: (1) OJCS processes so many thousands
of jobs that operators have little opportunity
to become familiar with the peculiarities of

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each job they handle; (2) the sheer volume of
work produced at OJCS makes human error
unavoidable; and (3) OJCS has so many operators
on rotating shifts that communication (no
matter how good) will inevitably break down.

b. Equipment problems constitute the
factor least subject to control. You can do
nothing about them until they occur, and
the OJCS computing environment includes "one
heck of a lot of equipment."

c. In some cases, job turnaround could
be improved by redesign of applications to
better accommodate the RJE environment.
Given present staffing, however, and the
competing development jobs in queue, it is
doubtful that this will be done in the
foreseeable future.

d. CRS's Data Management Branch has not
yet been passed the responsibility for control
of the CRS on-line jobs, nor have they been
called on for support of Project SAFE
applications. Project SAFE will greatly
expand OJCS tape handling and DMB logging
responsibilities. The associated manpower
costs and problems can be expected to rise
accordingly!

7. In addition to the production problems noted
above, we are concerned about the level of support we
can expect in the future. In late April 1973, we
provided OJCS with planning requirements for Core,
Direct Access Storage, Estimated CPU Hour Needs, and
Terminals. The above took cognizance of our develop-
ment plans through July 1975, including Project SAFE.
On 18 September 1973, we reviewed our requirements
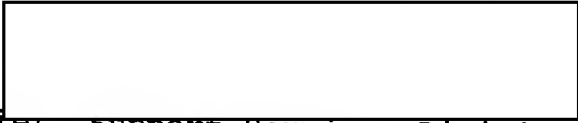with the Deputy Chief, Operations Division, OJCS, and
were given assurances that CRS requirements would be

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met. A week later, however, we were advised that, due to a re-evaluation of OJCS requirements, they would be unable to provide all of the requested core, and offered instead to provide approximately 50% of our original request. This reduction forces CRS to scale down planned support for CRS/ISG divisions, as well as support for the SAFE pilot branches. It also forces us to schedule on-line program debug sessions during nonprime time (2000 to 0700 hours, Monday through Friday, or on weekends).

8.   The support now promised will accommodate the basic needs of CRS until February 1974. After this date (if relief isn't provided) further development delays or degradation of CRS services can be expected and SAFE will be severely constrained. This kind of unilateral decision-making does not give us much comfort in trying to plan for the future. Backup support for our on-line applications (less MAD) is another area which is extremely shakey, and at the moment we do not know what OJCS plans to do in this area.

9.   We have also heard rumblings concerning complete reviews of all CRS applications by OJCS specialists. While this probably is to be expected, it adds another dimension of concern for our ability to support CRS and DDI needs in the future. We would be the first to admit that many CRS applications could be improved by redesign to fit into the OJCS operating environment. To undertake this on any wholesale basis at this time, however, would effectively stretch out the conversion effort for another year or more, and delay any new developmental efforts accordingly.

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Chief, Support Services Division
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